IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s):	Kazama, Toshio		
Assignee:	NHK Spring Co., Ltd.		
Title:	Conductive Contact Member Having A Contact Surface Protected From Solder Deposition		
Serial No.:	10/070,290	Filing Date:	February 28, 2002
Examiner:	Tsukerman, Larisa Z.	Group Art Unit:	2833
Docket No.:	AB-1215 US		

Irvine, California
January 24, 2005

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Dated: January 24, 2005

David S. Park, Reg. No. 52,094

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APPEAL BRIEF UNDER 37 C.F.R. § 1.191

Dear Sirs:

In response to the Final Office Action dated August 24, 2004 (the "Final Office Action), Appellant submits this Appeal Brief. The Commissioner is hereby authorized to deduct the amount of $500.00 from Deposit Account No. 50-2257 for this Appeal Brief. The Commissioner is also authorized to deduct any other amounts required for this Appeal Brief and to credit any amounts overpaid to Deposit Account No. 50-2257. If an extension of time is required for timely filing of the enclosed document(s) after all papers filed with this transmittal have been considered, an extension of time is hereby requested.

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I. REAL PARTY IN INTEREST

The real party in interest is the assignee, NHK Spring Co., Ltd., as named in the caption above.

II. RELATED APPEALS AND INTERFERENCES

Based on information and belief, there are no appeals or interferences that could directly affect or be directly affected by or have a bearing on the decision by the Board of Patent Appeals in the pending appeal.

III. STATUS OF CLAIMS

Claims 1-2 and 4-10 are pending, of which Claims 1-2 and 4-10 stand rejected. Claim 3 was canceled. Claims 1-2 and 4-10 are the appealed claims. Please see the Appendix for a listing of the pending claims.

IV. STATUS OF AMENDMENTS

On June 21, 2004, Appellant submitted a response to the March 19, 2004 Office Action. Claims 1, 9, and 10 were lastly amended in that response and the amendments were entered as per the Final Office Action. No further amendments were made after the Final Office Action.

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V. SUMMARY OF CLAIMED SUBJECT MATTER

Conventionally, when a contact probe has been repeatedly applied to an object to be tested that is made of solder or covered by solder, the solder from such object to be contacted may gradually transfer and deposit on the contact surface of the contact probe over time. Such deposition of solder on the contact surface is not desirable as it prevents a stable conductance of electricity between the object and the contact surface of the contact probe and decreases testing efficiency (e.g., Specification, page 1, lines 4-24).

The present invention is directed toward a contact member that is applied to an object including solid solder for testing and other applications in the field of semiconductor devices. The present invention prevents such contamination of the contact member by placing a layer of gold added with silver over the contact surface of the contact member. In one embodiment, a conductive contact member (e.g., FIG. 1, item 3) is provided for establishing a temporary electric contact by being applied under a resilient force to an object to be contacted that includes solid solder (e.g., FIGS. 1, 5, 9, item 7a), the contact member comprising: a layer of highly electrically conductive material resistant to solder deposition and essentially consisting of gold containing a small amount of silver (e.g., FIGS. 2-4, items 8a and 8b; FIG. 7, item 18; FIG. 9, item 18'), the layer being formed at least over a conductive contact part of the conductive contact member so that the conductive contact part of said conductive contact member may not be contaminated by deposition of solder from the object to be contacted (Claim 1; e.g., Specification, page 2, lines 12-22).

The layer of the conductive contact member may be formed by plating in one example (Claim 2; e.g., Specification, page 6, line 25, page 7, lines 11-12). In yet another example, silver may be added to gold by 0.01% to 8% in the layer (Claim 4; e.g., Specification, page 2, lines 18-20, page 6, line 25).

The conductive contact member may take several forms, including but not limited to, a coil (e.g., Specification, page 4, line 25; FIG. 1, item 3), needle member having a pointed end (e.g., Specification, page 10, lines 1-4; FIG. 6, item 14), and rod member having a flat end (e.g., Specification, page 11, lines 11-13; FIG. 9, item 14a') (Claim 5). The conductive contact member may also be in the form of a compression coil spring, and the solder resistant layer may be formed around a coil wire forming the coil spring (Claim 7; e.g., Specification, page 6, line 23-page 7, line 10). The conductive contact member may further be in the form of a compression coil spring having a contact part consisting of closely wound turns of a coil

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wire, and the solder resistant layer may be formed over an outer surface of the closely wound turns of the coil wire (Claim 8; e.g., Specification, page 7, lines 11-20). The conductive contact member may also be made of steel (Claim 6; e.g., Specification, page 5, line 1).

The present invention also provides a conductive contact member comprising a layer of highly electrically conductive material resistant to solder deposition and essentially consisting of an alloy of gold added with silver, the layer being formed at least over a conductive contact part of said conductive contact member so that said conductive contact part of said conductive contact member may not be contaminated by deposition of solder from said object to be contacted (Claim 9; e.g., Specification, page 2, lines 12-22; FIGS. 2-4, items 8a and 8b; FIG. 7, item 18; FIG. 9, item 18').

In yet another embodiment, the present invention provides a conductive contact member comprising a layer of highly electrically conductive material resistant to solder deposition and essentially consisting of a homogeneous mixture of gold added with silver, the layer being formed at least over a conductive contact part of said conductive contact member so that said conductive contact part of said conductive contact member may not be contaminated by deposition of solder from said object to be contacted (Claim 10; e.g., Specification, page 2, lines 12-22; FIGS. 2-4, items 8a and 8b; FIG. 7, item 18; FIG. 9, item 18').

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

1. Claims 1-2, 4-6, and 9-10 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over DiRenzo (U.S. Patent No. 3,599,326) in view of Onodera et al. (U.S. Patent No. 6,133,537 hereinafter "Onodera").

2. Claims 1, 9, and 10 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Akram et al. (U.S. Patent No. 6,426,642 hereinafter "Akram") in view of Onodera.

3. Claims 7 and 8 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over DiRenzo in view of Onodera and further in view of Loranger et al. (U.S. Patent No. 5,791,914 hereinafter "Loranger").

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VII. ARGUMENT

1. DiRenzo in view of Onodera

Claims 1-2, 4-6, and 9-10 are rejected under 35 U.S.C. § 103(a) as being unpatentable over DiRenzo in view of Onodera.

In rejecting the claims in the August 24, 2004 Final Office Action, the Examiner wrote in part:

> **In regard to claims 1, 9 and 10,** DiRenzo discloses a conductive contact member 12 **(of a contact probe) for** establishing **a temporary** electric contact by being applied under **a resilient force (see Fig.2,** where pins 12 by comprising the curve portions provide a resilient characteristic[ ]) to an object to be contacted that includes solid solder, comprising a layer of highly electrically conductive material (**silver sulfide) resistant to solder deposition** (see Fig. 6 and Col. 1, lines 71-72 and Col. 3, lines 1-9, 22-24) . . . . However, DiRenzo lacks that **the layer** essentially consisting of **1)** gold containing a small amount of silver/ or **2)** an alloy of gold added with silver/ or **3)** homogeneous mixture of gold added with silver . . . . Onodera et al. teach contact comprises of AuAg(Pd) alloy that has a high anti-adhesion property and a highly stable contact resistance (see Abstract). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made and **for the same reason** to use AuAg(Pd) alloy, as taught by Onodera et al., in structure of DiRenzo. (Final Office Action, pages 2-3) (emphasis in original).

Appellant submits that DiRenzo discloses the following:

> [T]he present invention contemplates a method of manufacturing printed circuit boards of the type having a plurality of contact pins projecting from one side thereof, and which pins are adapted for use as wire wrap terminals connecting board-carried wiring to external circuits. The method includes selectively coating portions of the pins . . . with a material to which solder will not adhere to maintain the portions free of solder and in condition for making of wire wrap connections, followed by subjecting the boards and pins to a batch of molten solder to connect the pins to the circuits carried by the board. (DiRenzo, col.1, ll.36-47) (emphasis added).
>
> . . .

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> Still another method for applying a solder resistant coating comprises electroplating a layer of silver about .000025 inch thick on the gold plated pin to within about one-sixteenth inch of the solder pad. Again this leaves an exposed region of gold to which the solder will adhere. The assembly is then subjected to a hydrogen sulfide enriched atmosphere, whereby the silver coating is converted to silver sulfide which will reject solder during the wave soldering operation. The silver sulfide . . . is conductive and the ensuing wire wrap connection is as effective as if made directly to the untreated gold plated pin surface. (DiRenzo, col.3, ll.22-33) (emphasis added).

Thus, DiRenzo discloses an arrangement for preventing adherence of molten solder onto portions of pins that project from a printed circuit board when the circuit board is immersed or placed over a solder bath. Gold plated pins are disclosed as being selectively electroplated with a layer of silver which is converted to a coating of silver sulfide which is resistant to solder. Portions of the pins not selectively electroplated with the layer of silver is connected to the board circuits by the molten solder. Accordingly, DiRenzo discloses a composite of two layers: a layer of silver sulfide for solder resistance over a layer of gold for solder adherence. DiRenzo does not disclose or suggest a single layer essentially consisting of "gold containing a small amount of silver", or "an alloy of gold added with silver", or "a homogeneous mixture of gold added with silver" formed over a conductive contact part of a conductive contact member, as recited in independent Claims 1, 9, and 10, respectively.

Furthermore, DiRenzo does not disclose or suggest the prevention of adhesion resulting from contact with "solid solder", nor the establishing of "a temporary electric contact", nor the application of "a resilient force" as recited in independent Claims 1, 9, and 10. Instead DiRenzo discloses contact with molten solder and an electrical contact of a permanent nature with wire wrap connections. Also, DiRenzo does not disclose or suggest the application of a resilient force from the curve portions of the pins as "[s]older adheres . . . to the exposed, gold plated portions of pins [12] and to the adjacent pads 14, to form a fillet of about one-sixteenth inch as seen at 22 in FIGS. 5 and 6," (DiRenzo, col.2, lines 47-50), the fillet 22 thereby preventing the application of any resilient force from the curve portions to the free ends of the pins.

Appellant also submits that DiRenzo is directed toward nonanalogous art remote from the claimed invention and that a person of ordinary skill in the claimed art would not look to DiRenzo and its related art to solve the problem treated by the claimed invention. Appellant further submits that DiRenzo does not teach the problem of solder deposition on contact

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members or the problem source. As noted above, DiRenzo is directed toward connecting pins of a printed circuit board and providing wire wrap terminal connections. DiRenzo is wholly unrelated to "a conductive contact member for establishing a temporary electric contact by being applied under a resilient force to an object to be contacted that includes solid solder" as recited in independent Claims 1, 9, and 10.

Assuming arguendo that DiRenzo is analogous art, the Examiner admits that "DiRenzo lacks . . . the layer essentially consisting of 1) gold containing a small amount of silver/ or 2) an alloy of gold added with silver/ or 3) homogeneous mixture of gold added with silver," but then states that "it would have been obvious to one having ordinary skill in the art at the time the invention was made and for the same reason to use AuAg(Pd) alloy, as taught by Onodera et al., in structure of DiRenzo." (Final Office Action, pages 2-3).

However, Onodera teaches away from the use of a layer essentially consisting of 1) gold containing a small amount of silver or 2) an alloy of gold added with silver or 3) a homogeneous mixture of gold added with silver. Onodera discloses the following:

> Au and AuAg are so soft as showing a plastic deformation. This plastic deformation may cause a possible adhesion of the contact surface with an opposite contact surface. The adhesion of the contact surface with the opposite contact surface may cause the loss of reliability.
>
> A development of the contact surface layer material having an anti-adhesion property has been made. . . . 1-10% by weight of Pd and 10-100 ppm of C are added to Au or the AuAg alloy to prepare the contact surface layer material, so that the electric contact superior in anti-adhesion property and contact stability is obtained. (Onodera, col.1, ll.30-45).
>
> The present invention provides an electric contact structure comprising a first contact surface and a second contact surface, wherein at least one of the first and second contact surfaces comprises an AuAgPd alloy including 7-16% by weight of Ag and 1-10% by weight of Pd, whereby a high anti-adhesion property and a highly stable contact resistance can be obtained particularly when the electric contacts are in non-operating state. (Onodera, col.3, lines 23-30; Abstract) (emphasis added).

Thus, Onodera discloses the use of a gold/silver/palladium alloy for a contact surface layer in contacts suitable for switches and relays, and teaches away from using a layer essentially consisting of an alloy of gold and silver or a homogeneous mixture of gold added with silver.

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Appellant further submits that Onodera does not teach the problem of solder deposition on contact members or the problem source. Onodera does not disclose or suggest

material resistant to solder deposition but anti-adhesion characteristics between two like contact surfaces as for relay or switch devices, for example where both the moveable and fixed contacts contain a majority of gold. (Onodera, col.5, line 58-col.8, line 21). Onodera does not disclose or suggest solder or the problem of solder deposition.

Appellant also submits that Onodera is directed toward nonanalogous art remote from the claimed invention and that a person of ordinary skill in the claimed art would not look to Onodera and its related art to solve the problem treated by the claimed invention. Onodera is wholly unrelated to "a conductive contact member for establishing a temporary electric contact by being applied under a resilient force to an object to be contacted that includes solid solder" as recited in independent Claims 1, 9, and 10.

Furthermore, Onodera does not remedy the deficiencies of DiRenzo noted above with regard to the lack of disclosure for contact with solid solder, the permanent nature of the electric contact, and the absence of a resilient force.

Appellant further submits there is no teaching or suggestion in DiRenzo and Onodera for combining or modifying the references.

In contrast to the cited references above, Claim 1 recites a "conductive contact member for establishing a temporary electric contact by being applied under a resilient force to an object to be contacted that includes solid solder, comprising a layer of highly electrically conductive material resistant to solder deposition and essentially consisting of gold containing a small amount of silver."

Similarly in contrast, Claim 9 recites a "conductive contact member of a contact probe for establishing a temporary electric contact by being applied under a resilient force to an object to be contacted that includes solid solder, comprising a layer of highly electrically conductive material resistant to solder deposition and essentially consisting of an alloy of gold added with silver."

Similarly in contrast, Claim 10 recites a "conductive contact member of a contact probe for establishing a temporary electric contact by being applied under a resilient force to an object to be contacted that includes solid solder, comprising a layer of highly electrically conductive material resistant to solder deposition and essentially consisting of a homogeneous mixture of gold added with silver."

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Therefore, because DiRenzo and Onodera are not properly combinable, and further because DiRenzo and Onodera, alone or in combination, do not disclose or suggest all the limitations of Claims 1, 9, and 10, Claims 1, 9, and 10 are patentable over the cited references.

Claims 2 and 4-6 are dependent on Claim 1 and contain additional limitations that further distinguish them from DiRenzo in view of Onodera. Therefore, Claims 2 and 4-6 are allowable over the cited references for at least the same reasons provided above with respect to Claim 1.

2. Akram in view of Onodera

Claims 1, 9, and 10 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Akram in view of Onodera.

In rejecting the claims in the August 24, 2004 Final Office Action, the Examiner wrote in part:

> Akram et al. discloses a conductive contact member of a contact probe 62 **for** establishing a temporary electric contact by being applied under a resilient force to an object to be contacted that includes solid solder, comprising a plated layer of highly electrically conductive material resistant to solder deposition 64 (see Fig. 22-24) . . . . However, Akram et al. does not disclose that [ ] **the layer** essentially consisting of **1)** gold containing a small amount of silver/ or **2)** an alloy of gold added with silver/ or **3)** homogeneous mixture of gold added with silver, the layer being formed at least over a conductive contact part of the conductive contact member so that the conductive contact part of the conductive contact member (Col. 3, lines 22-25) may not be contaminated by deposition of solder from the object to be contacted. Onodera et al. teach contact comprises of AuAg(Pd) alloy that has a high anti-adhesion property and a highly stable contact resistance (see Abstract). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made and **for the same reason** to use AuAg(Pd) alloy, as taught by Onodera et al., in structure of Akram et al. (Final Office Action, pages 4-5) (emphasis in original).

Akram discloses the "formation of an insert for receiving and testing a . . . chip-scale-packaged microelectronic device having an array of outwardly projecting contacts, e.g., of a ball-grid-array or bump-grid-array (BGA). Such insert may also be known by other terms such as, for example, interconnect, interposer, socket, BGA test socket, or silicon insert."

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(Akram, col.4, ll.52-58). Such an insert includes a plurality of pockets 16 for receiving the solder balls of the device to be tested. *See* Akram, Figs. 14 and 29. The lining for such pockets are disclosed as being electroconductive and resistant to adhesion of solder at the same time.

Akram further discloses:

> [A] first conductive material 62 is formed conformably over . . . the walls of pockets 16. In an exemplary embodiment, conductive material 62 . . . comprises metal wetable by solder. Preferably, conductive layer 62 comprises copper . . . . Alternative metals for conductive material 62 include gold, palladium, nickel, chromium, or alloys thereof.
>
> After forming conductive material 62, second conductive material 64 is formed over first conductive material 62 . . . . The second conductive material comprises material different from the first conductive material 62 and is selected to resist bonding to solder. In certain exemplary embodiments, second conductive material 64 comprises a metal such as tungsten, titanium, platinum, titanium nitride or titanium-tungsten. (Akram, col. 10, ll.36-53) (emphasis added).

Thus, Akram discloses a composite of two layers: a first layer formed of a first conductive material 62, including gold or alloys thereof and wetable by solder; and a second layer formed of a second conductive material 64 selected to resist bonding to solder and that is different from the material 62; e.g., gold or alloys thereof.

Accordingly, as noted by the Examiner, Akram does not disclose or suggest a single layer essentially consisting of "gold containing a small amount of silver" or "an alloy of gold added with silver" or "a homogeneous mixture of gold added with silver" formed over a conductive contact part of said conductive contact member, as recited in independent Claims 1, 9, and 10, respectively.

Furthermore, Akram does not disclose or suggest a "conductive contact member . . . applied under a resilient force to an object to be contacted," as recited in independent Claims 1, 9, and 10. In contrast, Akram discloses a "biasing member 52" that provides "a force against force plate 50 which presses outwardly projecting contacts 14 of microelectronic device 38 into pockets 16 of the silicon insert 10." (Akram, col.11, line 66-col.12, line 4). In other words, Akram discloses a biasing force from the device to be tested whereas the claimed subject matter of the present invention provides that the conductive contact member is applied under a resilient force.

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For the same reasons as provided above, Onodera teaches away from the use of a layer essentially consisting of 1) gold containing a small amount of silver or 2) an alloy of gold added with silver or 3) a homogeneous mixture of gold added with silver.

Appellant further submits that Onodera does not teach the problem of solder deposition on contact members or the problem source. Onodera does not disclose or suggest material resistant to solder deposition but anti-adhesion characteristics between two like contact surfaces as for relay or switch devices, for example where both the moveable and fixed contacts contain a majority of gold. (Onodera, col.5, line 58-col.8, line 21). Onodera does not disclose or suggest solder or the problem of solder deposition.

Appellant also submits that Onodera is directed toward nonanalogous art remote from the claimed invention and that a person of ordinary skill in the claimed art would not look to Onodera and its related art to solve the problem treated by the claimed invention. Onodera is wholly unrelated to "a conductive contact member for establishing a temporary electric contact by being applied under a resilient force to an object to be contacted that includes solid solder" as recited in independent Claims 1, 9, and 10.

Appellant further submits there is no teaching or suggestion in Akram and Onodera for combining or modifying the references.

In contrast to the cited references above, Claim 1 recites a "conductive contact member for establishing a temporary electric contact by being applied under a resilient force to an object to be contacted that includes solid solder, comprising a layer of highly electrically conductive material resistant to solder deposition and essentially consisting of gold containing a small amount of silver."

Similarly in contrast, Claim 9 recites a "conductive contact member of a contact probe for establishing a temporary electric contact by being applied under a resilient force to an object to be contacted that includes solid solder, comprising a layer of highly electrically conductive material resistant to solder deposition and essentially consisting of an alloy of gold added with silver."

Similarly in contrast, Claim 10 recites a "conductive contact member of a contact probe for establishing a temporary electric contact by being applied under a resilient force to an object to be contacted that includes solid solder, comprising a layer of highly electrically

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conductive material resistant to solder deposition and essentially consisting of a homogeneous mixture of gold added with silver."

Therefore, because Akram and Onodera are not properly combinable, and further because Akram and Onodera, alone or in combination, do not disclose or suggest all the limitations of Claims 1, 9, and 10, Claims 1, 9, and 10 are patentable over the cited references.

3. DiRenzo in view of Onodera and further in view of Loranger

Claims 7 and 8 are rejected under 35 U.S.C. § 103(a) as being unpatentable over DiRenzo in view of Onodera and further in view of Loranger.

The Examiner cites Loranger for its disclosure of a compression coil spring 11. As noted by the Examiner in the February 14, 2003 Office Action, "Loranger does not disclose a layer of highly electrically conductive material resistant to solder deposition formed at least over a conductive contact part of the contact member." (Office Action dated 2/14/03, page 5). Loranger also does not remedy the deficiencies of DiRenzo and Onodera noted above with regard to the lack of disclosure for contact with solid solder, the permanent nature of the electric contact, and the absence of a resilient force. Claims 7 and 8 are dependent on Claim 1 and contain additional limitations that further distinguish them from DiRenzo in view of Onodera and further in view of Loranger. Therefore, Claims 7 and 8 are allowable over the cited references for at least the same reasons provided above with respect to Claim 1.

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VIII. CONCLUSION

For the above reasons, Appellant respectfully submits that the rejection of pending Claims 1-2 and 4-10 is unfounded. Accordingly, Appellant requests that the rejection of Claims 1-2 and 4-10 be reversed.

Certificate of Transmission

I hereby certify that this correspondence is being facsimile transmitted to the Board of Patent Appeals and Interferences, Fax No. 571-273-0038 on the date stated below.

David S. Park January 24, 2005

Respectfully submitted,

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APPENDIX

1. A conductive contact member for establishing a temporary electric contact by being applied under a resilient force to an object to be contacted that includes solid solder, comprising a layer of highly electrically conductive material resistant to solder deposition and essentially consisting of gold containing a small amount of silver, the layer being formed at least over a conductive contact part of said conductive contact member so that said conductive contact part of said conductive contact member may not be contaminated by deposition of solder from said object to be contacted.

2. A conductive contact member according to claim 1, wherein said layer is formed by plating.

3. (canceled)

4. A conductive contact member according to claim 1, wherein silver is added to gold by 0.01% to 8%.

5. A conductive contact member according to claim 1, wherein said conductive contact member is selected from the group consisting of a coil, needle member having a pointed end, and rod member having a flat end.

6. A conductive contact member according to claim 1, wherein said conductive contact member is made of steel.

7. A conductive contact member according to claim 1, wherein said conductive contact member is in the form of a compression coil spring, and said solder resistant layer is formed around a coil wire forming said coil spring.

8. A conductive contact member according to claim 1, wherein said conductive contact member is in the form of a compression coil spring having a contact part consisting of closely

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wound turns of a coil wire, and said solder resistant layer is formed over an outer surface of said closely wound turns of the coil wire.

9. A conductive contact member of a contact probe for establishing a temporary electric contact by being applied under a resilient force to an object to be contacted that includes solid solder, comprising a layer of highly electrically conductive material resistant to solder deposition and essentially consisting of an alloy of gold added with silver, the layer being formed at least over a conductive contact part of said conductive contact member so that said conductive contact part of said conductive contact member may not be contaminated by deposition of solder from said object to be contacted.

10. A conductive contact member of a contact probe for establishing a temporary electric contact by being applied under a resilient force to an object to be contacted that includes solid solder, comprising a layer of highly electrically conductive material resistant to solder deposition and essentially consisting of a homogeneous mixture of gold added with silver, the layer being formed at least over a conductive contact part of said conductive contact member so that said conductive contact part of said conductive contact member may not be contaminated by deposition of solder from said object to be contacted.

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LOCATION: U.S. Patent and Trademark Office

FACSIMILE NUMBER: (571) 273-0053

REFERENCE: *IN RE* APPLICATION OF XIANG-JIN MENG *et al.*
APPLICATION NUMBER: 10/184,191
CONFIRMATION NUMBER: 6011
FILED: June 27, 2002
GROUP ART UNIT: 1634
ATTORNEY DOCKET NUMBER: AM100732

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FROM: Anne M. Rosenblum
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES
(Attorney Docket No. AM100732)

In re Application of:	Appln. No.: 10/184,191
	Confirmation No.: 6011
XIANG-JIN MENG *et al.*	Group Art Unit: 1634
	Examiner: Juliet C. Switzer
Filed: June 27, 2002	Paper No.: 14
	ATTENTION: Clerk

For: DIFFERENTIAL PCR-RFLP ASSAY FOR DETECTING AND DISTINGUISHING BETWEEN NONPATHOGENIC PCV-1 AND PATHOGENIC PCV-2

WITHDRAWAL OF APPEAL

Dear Sir:

Applicants hereby withdraw the appeal to the Board of Patent Appeals and Interferences in the above-referenced application and inform the Clerk of the Board that the application has been timely re-filed as a continuation application in the U.S. Patent and Trademark Office on January 21, 2005. For the record, it is further stated that the withdrawal of this appeal does not reflect any admission or opinion regarding the merits of the case on appeal.

Thank you for your attention to this matter.

Respectfully submitted,

VIRGINIA TECH INTELLECTUAL PROPERTIES, INC.

Date: January 24, 2005

By: Anne M Rosenblum
Anne M. Rosenblum
Attorney for Applicants
Registration No. 30,419

CERTIFICATE OF FACSIMILE TRANSMISSION

I hereby certify that this correspondence is being facsimile transmitted to the U.S. Patent and Trademark Office, Facsimile No. (571) 273-0053, on January 24, 2005.

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